

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.6  
Revision Date 07.03.2024  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : 2-(Diethylamino)ethanol

Product Number : 471321

Brand : Aldrich

Index-No. : 603-048-00-6

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 100-37-8

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

Company : Merck Life Science UK Limited  
New Road  
The Old Brickyard  
GILLINGHAM  
Dorset  
SP8 4XT  
UNITED KINGDOM

Telephone : +44 (0)1747 833-000

Fax : +44 (0)1747 833-313

E-mail address : TechnicalService@merckgroup.com

### 1.4 Emergency telephone

Emergency Phone # : +44 (0)870 8200418 (CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567**

Flammable liquids, (Category 3) H226: Flammable liquid and vapor.

Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Acute toxicity, (Category 3)	H331: Toxic if inhaled.
Acute toxicity, (Category 3)	H311: Toxic in contact with skin.
Skin corrosion, (Sub-category 1B)	H314: Causes severe skin burns and eye damage.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Pictogram



Signal Word

Danger

Hazard Statements

H226

Flammable liquid and vapor.

H302

Harmful if swallowed.

H311 + H331

Toxic in contact with skin or if inhaled.

H314

Causes severe skin burns and eye damage.

Precautionary Statements

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

### Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H314

Causes severe skin burns and eye damage.

H311 + H331

Toxic in contact with skin or if inhaled.

Precautionary Statements

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: N,N-Diethylethanolamine
Formula	: C <sub>6</sub> H <sub>15</sub> NO
Molecular weight	: 117.19 g/mol
CAS-No.	: 100-37-8
EC-No.	: 202-845-2
Index-No.	: 603-048-00-6

Component	Classification	Concentration
<b>2-diethylaminoethanol</b>		
CAS-No. 100-37-8 EC-No. 202-845-2 Index-No. 603-048-00-6	Flam. Liq. 3; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; H226, H302, H331, H311, H314 Concentration limits: >= 5 %: STOT SE 3, H335;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Foam Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Store under inert gas.

#### Storage class

Storage class (TRGS 510): 3: Flammable liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, acute	inhalation	Local effects	24 mg/m <sup>3</sup>
Worker DNEL, longterm	inhalation	Local effects	24 mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0.044 mg/l
Sea water	0.0044 mg/l
Aquatic intermittent release	4.4 mg/l
Fresh water sediment	0.475 mg/kg
Sea sediment	0.0475 mg/kg
Soil	0.069 mg/kg
Sewage treatment plant	10 mg/l

### 8.2 Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm  
Break through time: 30 min  
Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

### **Body Protection**

Flame retardant antistatic protective clothing.

### **Respiratory protection**

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |   |   |
|---|---|
| a) Physical state                               | clear, liquid   |
| b) Color  | colorless   |
| c) Odor   | ammoniacal  |
| d) Melting point/freezing point                 | Melting point/range: -68 °C - OECD Test Guideline 102                               |
| e) Initial boiling point and boiling range      | 161 °C - lit.   |
| f) Flammability (solid, gas)                    | No data available   |
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 11.7 %(V)<br>Lower explosion limit: 1.4 %(V)                 |
| h) Flash point                                  | 50 °C - closed cup  |
| i) Autoignition temperature                     | 320 °C<br>at 1,013 hPa  |
| j) Decomposition temperature                    | No data available   |
| k) pH   | No data available   |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: 4.022 mPa.s at 25 °C |
| m) Water solubility                             | completely miscible   |
| n) Partition coefficient: n-octanol/water       | Pow: 0.21 at 23 °C  |
| o) Vapor pressure                               | 1 hPa at 20 °C  |
| p) Density                                      | 0.884 g/cm <sup>3</sup> at 25 °C - lit.   |

Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

Relative vapor density	4.05 - (Air = 1.0)
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Violent reactions possible with:

Oxidizing agents

Peroxides

acids

### 10.4 Conditions to avoid

hygroscopic Avoid moisture.

Heating.

### 10.5 Incompatible materials

Aluminum, Copper, Zinc

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 1,320 mg/kg

LC50 Inhalation - Rat - male and female - 4 h - 4.6 mg/l - vapor

Dermal: No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 4 h



(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Corrosive

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Did not cause sensitization on laboratory animals.

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

**Endocrine disrupting properties**

**Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 50 - 400 mg/kg

RTECS: KK5075000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis,

pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 1,780 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 165 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - 44 mg/l - 72 h

### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 22 d Result: 95 % - Readily biodegradable. (OECD Test Guideline 301A)
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### 12.3 Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) - 28 d - 0.2 mg/l(2-diethylaminoethanol)
	Bioconcentration factor (BCF): < 6.1 (OECD Test Guideline 305C)

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

#### **Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

No data available



## 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

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### SECTION 16: Other information

#### Full text of H-Statements

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.

#### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its

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## Annex: Exposure scenario

### Identified uses:

#### Use: Industrial use

<b>SU 3:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites
<b>SU 3, SU9, SU 10:</b> Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of fine chemicals, Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
<b>PC19:</b> Intermediate <b>PC21:</b> Laboratory chemicals
<b>PROC1:</b> Use in closed process, no likelihood of exposure <b>PROC2:</b> Use in closed, continuous process with occasional controlled exposure <b>PROC3:</b> Use in closed batch process (synthesis or formulation) <b>PROC4:</b> Use in batch and other process (synthesis) where opportunity for exposure arises <b>PROC5:</b> Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) <b>PROC8a:</b> Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities <b>PROC8b:</b> Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities <b>PROC9:</b> Transfer of substance or preparation into small containers (dedicated filling line, including weighing) <b>PROC10:</b> Roller application or brushing <b>PROC15:</b> Use as laboratory reagent
<b>ERC2, ERC4, ERC6a:</b> Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use resulting in manufacture of another substance (use of intermediates)

#### Use: Professional use

<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
<b>SU 22:</b> Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
<b>PC21:</b> Laboratory chemicals
<b>PROC15:</b> Use as laboratory reagent
<b>ERC2, ERC6a:</b> Formulation of preparations, Industrial use resulting in manufacture of another substance (use of intermediates)

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### 1. Short title of Exposure Scenario: Industrial use

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Main User Groups	: <b>SU 3</b>
Sectors of end-use	: <b>SU 3, SU9, SU 10</b>
Chemical product category	: <b>PC19, PC21</b>
Process categories	: <b>PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a,</b>

**PROC8b, PROC9, PROC10, PROC15**Environmental Release Categories : **ERC2, ERC4, ERC6a:****2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC15****Product characteristics**

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).  
 Physical Form (at time of use) : Low volatile liquid  
 Process Temperature : < 37 °C

**Frequency and duration of use**

Frequency of use : 8 hours/day  
 Frequency of use : 5 days/week

**Other operational conditions affecting workers exposure**

Outdoor / Indoor : Indoor with local exhaust ventilation (LEV)

**Organizational measures to prevent /limit releases, dispersion and exposure**

Covers daily exposures up to 8 hours.

**Conditions and measures related to personal protection, hygiene and health evaluation**

Use suitable eye protection., Wear suitable coveralls to prevent exposure to the skin., Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

**3. Exposure estimation and reference to its source****Environment**

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

**Workers**

<b>Contributing Scenario</b>	<b>Exposure Assessment Method</b>	<b>Specific conditions</b>	<b>Value</b>	<b>Level of Exposure</b>	<b>RCR*</b>
PROC1	ECETOC TRA 2	acute, inhalative, local			< 0.01
PROC1	ECETOC TRA 2	longterm, inhalative, local			< 0.01
PROC2	ECETOC TRA 2	acute, inhalative, local			0.04
PROC2	ECETOC TRA 2	longterm, inhalative, local			0.02
PROC3	ECETOC TRA 2	acute, inhalative, local			0.12
PROC3	ECETOC TRA 2	longterm, inhalative, local			0.06

PROC4	ECETOC TRA 2	acute, inhalative, local			0.20
PROC4	ECETOC TRA 2	longterm, inhalative, local			0.10
PROC5	ECETOC TRA 2	acute, inhalative, local			0.20
PROC5	ECETOC TRA 2	longterm, inhalative, local			0.10
PROC8a	ECETOC TRA 2	acute, inhalative, local			0.41
PROC8a	ECETOC TRA 2	longterm, inhalative, local			0.20
PROC8b	ECETOC TRA 2	acute, inhalative, local			0.06
PROC8b	ECETOC TRA 2	longterm, inhalative, local			0.03
PROC9	ECETOC TRA 2	acute, inhalative, local			0.20
PROC9	ECETOC TRA 2	longterm, inhalative, local			0.10
PROC10	ECETOC TRA 2	acute, inhalative, local			0.81
PROC10	ECETOC TRA 2	longterm, inhalative, local			0.20
PROC15	ECETOC TRA 2	acute, inhalative, local			0.20
PROC15	ECETOC TRA 2	longterm, inhalative, local			0.10

\*Risk characterisation ratio

#### 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

For scaling of worker exposure assessments performed with ECETOC TRA, please consult the Merck tool ScIDeEx® at [www.merckmillipore.com/scideex](http://www.merckmillipore.com/scideex).

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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#### 1. Short title of Exposure Scenario: Professional use

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Main User Groups : **SU 22**  
 Sectors of end-use : **SU 22**  
 Chemical product category : **PC21**  
 Process categories : **PROC15**



Environmental Release Categories : **ERC2, ERC6a:**

## 2.2 Contributing scenario controlling worker exposure for: PROC15

### Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).  
Physical Form (at time of use) : Low volatile liquid  
Process Temperature : < 37 °C

### Frequency and duration of use

Frequency of use : 8 hours/day  
Frequency of use : 5 days/week

### Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor with local exhaust ventilation (LEV)

### Organizational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

### Conditions and measures related to personal protection, hygiene and health evaluation

Use suitable eye protection., Wear suitable coveralls to prevent exposure to the skin., Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

## 3. Exposure estimation and reference to its source

### Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC15	ECETOC TRA 2	acute, inhalative, local			0.81
PROC15	ECETOC TRA 2	longterm, inhalative, local			0.20

\*Risk characterisation ratio

## 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

For scaling of worker exposure assessments performed with ECETOC TRA, please consult the Merck tool ScIDeEx® at [www.merckmillipore.com/scideex](http://www.merckmillipore.com/scideex). Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and

